

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/021885

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04B1/40

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04B G01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A Y	US 2002/118784 A1 (STEER DAVID G ET AL) 29 August 2002 (2002-08-29) column 1, paragraph 1 column 5, paragraph 45 figure 1 figure 5	1, 5, 34, 43 10-17 2, 39, 44
X A	US 6 112 141 A (BRIFFE MICHEL ET AL) 29 August 2000 (2000-08-29) figure 2 column 5, line 66 - column 6, line 13 ----- -/--	1, 34, 43 3, 4, 40, 42, 45

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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G document member of the same patent family

Date of the actual completion of the international search

30 November 2004

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10/12/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Avilés Martínez, L

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/072320 A1 (LEE YOUNG-KON ET AL) 17 April 2003 (2003-04-17) page 4, paragraph 44 figure 2 figure 3	1,5-8, 18,34,43
X	EP 1 168 646 A (TRW INC) 2 January 2002 (2002-01-02) page 1, paragraph 3 figures 1,6	1,34,43
X A	WO 02/25304 A (PARTHUS UK LTD ; PRATT ANTHONY R (GB)) 28 March 2002 (2002-03-28) page 5, line 6 - line 15 figure 1	29,34,43 9,24,32, 37
X A	US 5 909 193 A (DIRNDORFER WALTER M ET AL) 1 June 1999 (1999-06-01) column 1, line 25 - line 35 column 2, line 10 - line 12 column 2, line 47 - line 67	1,34,43 11-17, 19,26, 27,38
X	EP 1 168 637 A (TRW INC) 2 January 2002 (2002-01-02) paragraph '0001! figure 1 claim 1	1,34,43
Y	US 5 771 396 A (ARNOLD BRIAN K) 23 June 1998 (1998-06-23) column 2, line 16 - line 22 column 2, line 63 - line 65	2,39,44
A	US 6 069 583 A (WALSH DAVID ET AL) 30 May 2000 (2000-05-30) column 8, line 4 - line 10 figure 5	10,25
X	US 5 317 323 A (HOOPER ROBERT W ET AL) 31 May 1994 (1994-05-31) column 2, line 65 - column 3, line 5 figure 5	1,29,34, 43
X	US 5 936 571 A (DESJARDINS GERARD A) 10 August 1999 (1999-08-10) column 1, line 12 - line 16 column 3, line 27 - line 34 column 6, line 51 - line 65 figures 2,4	1,29,34, 43

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/021885

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2002118784	A1	29-08-2002	NONE	
US 6112141	A	29-08-2000	NONE	
US 2003072320	A1	17-04-2003	KR 2003031303 A	21-04-2003
EP 1168646	A	02-01-2002	US 6760342 B1	06-07-2004
			EP 1168646 A2	02-01-2002
			JP 2002057593 A	22-02-2002
WO 0225304	A	28-03-2002	GB 2367199 A	27-03-2002
			AU 9006901 A	02-04-2002
			WO 0225304 A1	28-03-2002
			US 2002033766 A1	21-03-2002
US 5909193	A	01-06-1999	AU 6967096 A	19-03-1997
			WO 9708829 A1	06-03-1997
EP 1168637	A	02-01-2002	US 6804308 B1	12-10-2004
			EP 1168637 A2	02-01-2002
			JP 2002057594 A	22-02-2002
US 5771396	A	23-06-1998	DE 69431332 D1	17-10-2002
			DE 69431332 T2	02-01-2003
			DE 69432613 D1	05-06-2003
			DE 69432613 T2	25-03-2004
			EP 1152343 A1	07-11-2001
			EP 0641139 A2	01-03-1995
			JP 7058881 A	03-03-1995
US 6069583	A	30-05-2000	NONE	
US 5317323	A	31-05-1994	NONE	
US 5936571	A	10-08-1999	NONE	